IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:		)	
	Stenland, *et al.*	)	Examiner: Horning, M.
Serial No.:	10/659,789	)	Art Unit: 1645
Filed:	September 10, 2003	)	Attorney Doc. No. MSC 8015
For:	Prion Clearance Using Particulate	)	(B185 1210.1)
	Metal Oxides	)	Confirmation No. 5573

Declaration Under 37 CFR § 1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

I, Jarrett C. Terry, residing at 9916 Miranda Drive, Raleigh, NC 27617, state as follows:

1. I am one of the applicants in the above-identified patent application and a joint inventor of the subject matter claimed in the application.

2. The invention claimed in the above-identified application was conceived and reduced to practice prior to April 4, 2003, the effective date of *Carbonell, et al.*, as evidenced by the attached *Exhibits 1* and *2*. Both *Exhibits* are copies of notebook pages that were signed, witnessed, and dated prior to April 4, 2003 (actual dates redacted). *Exhibit 1* shows experiments wherein 1) a filtrate comprising biological material was spiked with scrapie brain homogenate (SBH; rodent-adapted sheep scrapie brain homogenate, a source of prion protein), 2) the solution was contacted with Cab-O-Sil (a fumed silica filter aid produced by Cabot Corporation), and 3) a resulting solution was separated from the Cab-O-Sil filter aid. The gels shown depict substantial clearance of prion protein via contact with fumed silica following its removal from the solution. *Exhibit 2* shows similar clearance experiments using SBH-spiked samples and subsequent contact of the test

solution with aluminum hydroxide ($Al(OH)_3$). Again, a substantial clearance of prion protein was noted.

3. The Exhibits show that adding a metal oxide, e.g., fumed silica or aluminum hydroxide, to a biological material to obtain a solution comprising a mixture of the metal oxide and the biological material and separating the metal oxide from the mixture to form a resulting solution results in a substantial reduction of pathogenic prion proteins possibly contaminating the biological material. Accordingly, the claimed invention was conceived and reduced to practice prior to April 4, 2003.

I hereby declare that all statements made herein are of my own knowledge and are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of United States Code and that such willful false statements may jeopardize the validity of this application or any patent issued thereon.

3/18/08
Date

Jarrett C. Terry

Exhibit 1

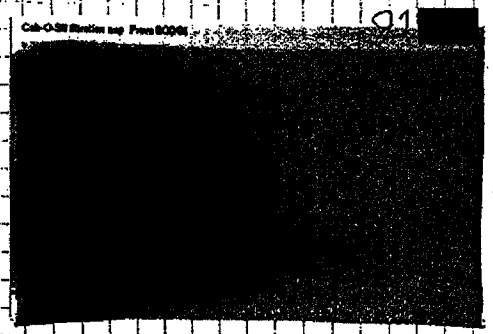
BAYER CORPORATION

SUBJECT Cab-O-Sil filtration Study

Purpose: Proof of principle to determine if Cab-O-Sil can remove PrP signal in a column format.

Methods: 20 mLs of the filtrate generated on p. 61 of this book was spiked with 200µL of Chandler SBH.
0.01g Cab-O-Sil was dissolved into 10 mL of dH_2O (Barnstead) and 1mL of the resulting suspension was pushed across the membranes in the study to coat them.
4 mLs of the SBH spiked filtrate was removed as a "Prove" sample. Syringe filters identical to the ones coated with cab-o-sil were also employed with this study to determine PrP removal by the filters without Cab-O-Sil.

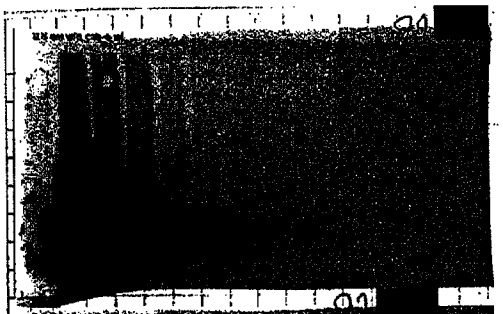
4mLs of each of the spiked solution was passed over a 0.22µm Millex filter both with and without Cab-O-Sil and a 0.8µm Millex filter with and without Cab-O-Sil. The clearance results are as follows:

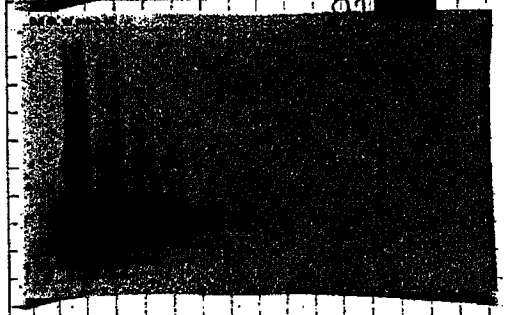


SIGNED BY Jarrett Terry
WITNESSED AND UNDERSTOOD BY Randal Harnish DATE [redacted]
CROSS REFERENCES:

BAYER CORPORATION

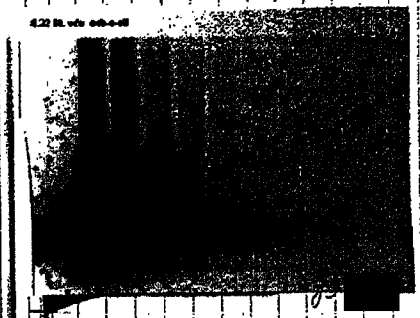
SUBJECT Contd from p. 62

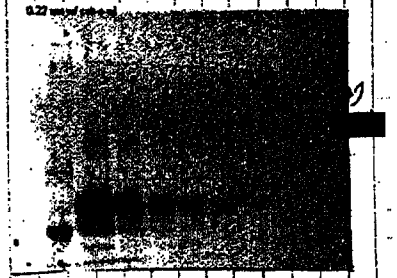




Clearance - Total: 0.8µm Millex 1.5 log with respect to the prove with Cab-O-Sil present.

Total for the 0.22µm Millex = 2.0 logs with respect to the Prove.



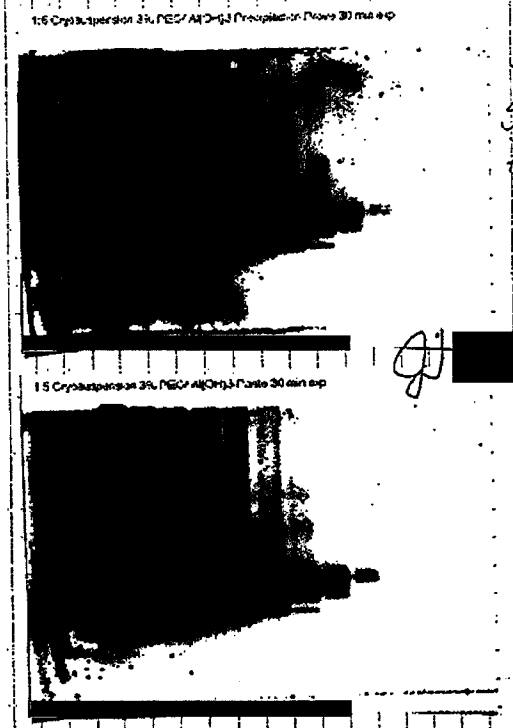


SIGNED BY Jarrett Terry
WITNESSED AND UNDERSTOOD BY Randal Harnish DATE [redacted]
CROSS REFERENCES:

Exhibit 2

BAYER CORPORATION

SUBJECT 1:5 Cryosuspension 3% PEG, $Al(OH)_3$



The 'New Products' clearance group had reported that spiking SBH into a protein-free media ie. TBS/PBS and treating with 3% PEG/$Al(OH)_3$ yielded total clearance with regard to the filtrate.

We decided to use a 1:5 dilution in HPW to try to demonstrate the same level of clearance.

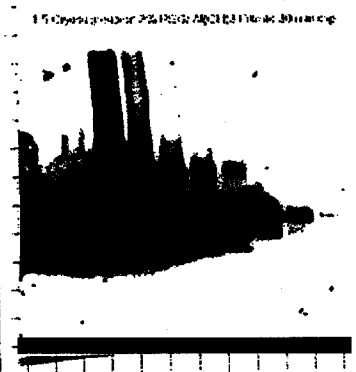
Prepared the cryosuspension as per usual. Removed 4mLs and added to 16 mL HPW. Spiked 18 mLs of this solution with 2 mLs SBH and continued with the same PEG/$Al(OH)_3$ addition as usual.

Results:
Five to 5½ logs of detection were visible in the Prove and prisette while 4-4½ logs was visible in the filtrate.
In the past this step has yielded 2-3 log clearance values consistently.

SIGNED BY Janett Jung DATE [redacted]
WITNESSED AND UNDERSTOOD BY [redacted] DATE [redacted]
CROSS REFERENCES:

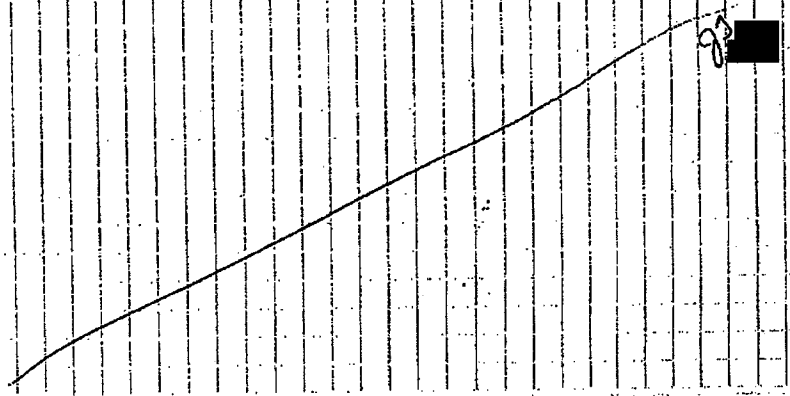
BAYER CORPORATION

SUBJECT 1:5 Cryosusp. (contd)



4-4.5 log detection in the filtrate.

These results raise the question: Does Prp^{Sc} selectively bind to the cryo material and coprecipitate with it? Will this phenomenon occur when we spike in albumin at various levels?



SIGNED BY Janett Jung DATE [redacted]
WITNESSED AND UNDERSTOOD BY [redacted] DATE [redacted]
CROSS REFERENCES: